

INTERNATIONAL SEARCH REPORT

Inter al Application No
PCT/IB2004/052942

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H05K1/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H05K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC, COMPENDEX, IBM-TDB

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|-----------------------|
| X | DATABASE WPI Section EI, Week 200462 Derwent Publications Ltd., London, GB; Class V04, AN 2004-639485 XP002339972 -& SE 0 102 907 L (MEVEIN HOLDING AG) 1 March 2003 (2003-03-01) cited in the application abstract; figure 2 | 6,7 |
| Y | | 1-5,12 |
| X | US 4 035 593 A (RINIKER ET AL) 12 July 1977 (1977-07-12) | 8-11 |
| Y | | 1-5,12 |

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

18 August 2005

Date of mailing of the international search report

31/08/2005

Name and mailing address of the ISA

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Dobbs, H

INTERNATIONAL SEARCH REPORT

Int. Application No
PCT/IB2004/052942

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|---|---------------------|----------------------------|-------------------------|
| SE 0102907 | L | NONE | |
| US 4035593 | A | 12-07-1977 | US 4131991 A 02-01-1979 |

From the
INTERNATIONAL SEARCHING AUTHORITY

REC'D 30 AUG 2004

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To:

see form PCT/ISA/220

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/B2004/052942

International filing date (day/month/year)
19.11.2004

Priority date (day/month/year)
21.11.2003

International Patent Classification (IPC) or both national classification and IPC
H05K1/00

Applicant
MEVEIN HOLDING AG

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1b/s(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/IB2004/052942

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/IB2004/052942

**Box No. V Reasoned statement under Rule 43b/s.1(a)(I) with regard to novelty, inventive step or
Industrial applicability; citations and explanations supporting such statement**

1. Statement

| | | |
|-------------------------------|-------------|--------|
| Novelty (N) | Yes: Claims | 1-5,12 |
| | No: Claims | 6-11 |
| Inventive step (IS) | Yes: Claims | |
| | No: Claims | 1-5,12 |
| Industrial applicability (IA) | Yes: Claims | 1-12 |
| | No: Claims | |

2. Citations and explanations

see separate sheet

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

Reference is made to the following documents:

D1: SE 0 102 907 A (MEVEIN HOLDING AG) 1 March 2003 (2003-03-01)

D2: US-A-4 035 593 (RINIKER ET AL) 12 July 1977 (1977-07-12)

1. The application does not meet the requirements of Article 6 PCT, because independent claims 1, 6 and 8 are not clear.

The term "detail" used in the said claims is vague and leaves the reader in doubt as to the meaning of the technical features to which it refers, thereby rendering the definition of the subject-matter of the claims unclear (Article 6 PCT).

2. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of independent claim 6 is not new in the sense of Article 33(2) PCT.

The document D1 discloses (the references in parentheses applying to this document):

A device (see Fig. 2) for producing a generally flat, planar detail, such as an electronic product or a component of such, from a plastically formable material (30), comprising means for first applying an adhesive cover layer (34) containing colour pigment on at least one of the surfaces of the detail, and means (40) for subsequent forming the detail plastically in order to obtain its end form.

The adhesive cover layer (34) according to D1 does not contain a circuit comprising electrical and/or optical conductors. However, the cover layer is not part of the device claimed, and the device disclosed in D1 is suitable to apply a cover layer containing such a circuit. Thus, D1 discloses a device with all the features of a device according to claim 6 (see the PCT Guidelines 5.23).

3. Furthermore, the subject-matter of independent claim 8 is not new in the sense of Article

33(2) PCT over document D2, and therefore the criteria of Article 33(1) PCT are not met.

The document D2 discloses (the references parentheses applying to this document):

A layer (10) containing colour pigments (ink, 14) and a circuit comprising electrical conductors (see col. 1, lines 61-66).

The layer according to D2 is flexible (see col. 1, lines 56-58) and therefore suitable to be used in the method according to claim 1. Thus, D2 discloses a layer with all the features of a layer according to claim 8 (see the PCT Guidelines 5.21).

4. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 does not involve an inventive step in the sense of Article 33(3) PCT.

The document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and discloses (the references in parentheses applying to this document):

A method of producing a generally flat, planar detail, such as an electronic product or a component of such, of a plastically formable material (30), comprising the steps of first applying an adhesive cover layer (34) containing colour pigment on at least one of the surfaces of the detail, and forming the detail plastically in order to obtain its end form (see Fig. 2).

The subject-matter of claim 1 therefore differs from this known method in that the cover layer contains a circuit comprising electrical and/or optical conductors.

The problem to be solved by the present invention may be regarded as to provide a detail with a built-in function. However, it is already generally known (eg. from D2) to include a circuit including electrical conductors into a flexible plastic layer in order to make a functional layer. Thus, it is obvious to the skilled person to endow the cover layer used in the device according to D1 with such a circuit in order to solve the above mentioned problem. Hence, the solution proposed in claim 1 does not involve an inventive step (Article 33(3) PCT).

5. Dependent claims 2-5, 7 and 9-12 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step.

The additional features of claims 4, 5 and 7 are known from D1, and the additional features of claims 2, 3 and 9-11 are known from D2. Thus, claims 7 and 9-11 are not novel over D1 and D2 respectively (Article 33(2) PCT), and claims 2-5 and 12 lack an inventive step (Article 33(3) PCT).